

Note on two ammonites from the Gin Gin Chalk

by **L. F. Spath**, D.Sc., F.G.S. *Communicated by L. Glauert.*

(*Read March 9, 1926. Published April 7, 1926.*)

Mr. L. Glauert, F.G.S. of the Western Australian Museum, through the kind intervention of Mr. Thomas H. Withers, F.G.S., has sent to me for examination two Gingin Chalk ammonites, which it is proposed to discuss briefly in the following lines. The specimens are labelled No. 3979 (One Tree Hill) and No. 10101 (three fragments).

Ammonites are not common in the Gingin Chalk and appear to be always in the condition of crushed or otherwise badly preserved casts. The seven examples recorded by R. Etheridge junr. in his paper on the "Cretaceous Fossils of the Gingin Chalk"* had long puzzled observer until Mr. Withers† announced the occurrence of the erinoid *Uintaerinus* in the Gingin Chalk and established the Senonian age of this deposit. In so recent a work as Dr. F. R. C. Reed's "Geology of the British Empire"‡ the Gingin Chalk was stated to comprise beds ranging from the Albian to the Cenomanian, its fauna showing a remarkable resemblance to that of corresponding English beds. Some of Etheridge's examples were compared to "*Haploceras*" *daintreei* Etheridge§ and to "*Haploceras*" *flindersi* M'Coy sp.||, of which latter "*Ammonites beudanti* Brongniart, var. *mitchelli*" Etheridge¶ referred to by the writer on a recent occasion** is said to be a

* Part IX. of Palaeontological Contributions to the Geology of W. Australia, (IV.) Geol. Surv. W. Austral. Bull. No. 55, 1913.

† Journ. Roy. Soc. W.A., vol. XI., No. 2, 1924, pp. 15-8.

‡ London (Edw. Arnold), 1921, p. 376.

§ "Description of the Palaeozoic and Mesozoic Fossils of Queensland" in Daintree, "Geology of Queensland." Quart. Journ. Geol. Soc. vol. XXVIII. (1872). pl. XXIV., figs. 1-2.

¶ Trans. Roy. Soc. Victoria, vol. VII. (1866), p. 49 (not figured).

|| Loc. cit. (1872), p. 345, pl. XXIII., figs. 1-2. *Haploceras* is a strictly Jurassic genus, see L. F. Spath "Ammonites and Aptychi" (VII.), Collection of Fossils and Rocks from Somaliland, Monogr. Hunterian Mus. Glasgow, I, 1925, p. 113.

** Spath, Monograph of the Ammonoidea of the Gault. (Pal. Soc.) part I. (1921), 1923, p. 52.

synonym. Mr. F. W. Whitehouse, M.Sc., is now revising the ammonite-fauna of the Rolling Downs Beds of Queensland, and, as the writer* mentioned in a recent paper, the occurrence of Aptian fossils together with Upper Albian forms, has hitherto prevented a correct identification of the Australian species. The true affinities of the Desmoceratids, described by Etheridge will thus, no doubt, soon be established, and it is clear that their resemblance to some of the Gingin Chalk forms is only superficial.

Another of Etheridge's examples was compared to *Amm. peramplus* Sharpe, non Mantell†; and a fourth, globose, species was considered to be entirely distinct, but from the description may also be a Pachydiscid.

The two examples under examination are also poorly preserved and, although recognisable at first sight as Pachydiscids and superficially resembling *Pachydiscus peramplus*, they cannot easily be referred to any one of the numerous genera of this family. *Eupachydiscus*, with similar periodic strengthened ribs, on the whole, seems the most likely group, i.e., the lineage including *E. isculensis* (Redtenbacher) and *E. jeani* (Grossouvre)‡ which, probably, also includes *Pachydiscus haradai* Jimbo, for which Yabe, in 1924§ used the name "*Mesopachydiscus*."

Until the Japanese forms are described and their horizons are known, definite identification and correlation are impossible. As it is we can only state that the two examples appear to belong to two separate species, and that the ammonite evidence supports Mr. Wither's view of the Santonian age of the Gingin Chalk. In a recent paper on "New Ammonites from the English Chalk"* the writer correlated the lower part of the zone of *Marsupites testudinarius* (or *Uintacrinus* bed) with the Upper Mortoniceratan age, characterised in England by the (rare) occurrence of *Parapuzosia (leptophylla)* group). The presence of comparable forms in the Gingin Chalk probably explains the identification, by Etheridge, of some of his examples with earlier species of "Puzosids."

From the zone of *Micraster cor-anguinum*, below the *Uintacrinus*

* Geological Magazine, February, 1926.

† "Description of the Fossil Remains of Mollusca in the Chalk of England." Cephalopoda. I., 1853, p. 26, pl. X. fig. 2. *Pachydiscus sharpei* Spath.

‡ See Spath, "Senonian Ammonite Fauna of Pondoland." Trans. Roy. Soc. S. Afr. Vol. X., part III, 1925, p. 124.

§ "Stratigraphical Sequence of the Lower Tertiary and Upper Cretaceous Deposits of Russian Saghalin." Japan. Journ. of Geol. and Geogr., vol. III., No. 1, 1924, p. 12.

* "Upper Albian Ammonoidea from Portuguese East Africa, etc. Annals Transv. Mus., vol. XI., pt. III., 1925, pp. 191 and ff.

bed, with *Mortoniceras texanum*, now also known from England. no Pachydiscids have been recorded by Grossouvet† but Yabe‡ mentioned what may be a *Eupachydiscus* even from the supposed Lower Senonian Himenoura Group, where perhaps *Nowakites* (*vaju* group) are likely to occur.

The genus *Pachydiscus*, it should be added, is here used (as in previous publications, and as listed in Diener's [3a] Catalogue) to cover only the group of *P. peramplus* Mantell sp. Since Grossouvre, however, in 1893§ restricted *Pachydiscus* to the group of *P. neubergicus* Hauser sp. (now *Parapachydiscus* Hyatt) our use of the term¶ is not in conformity with the law of priority in palaeontological nomenclature and can be justified only on grounds of universal sanction.

† "Les Ammonites de la Craie Supérieure." Recherches sur la Craie Sup. II., Mem. Carte Geol. Det. France, 1893, p. 237.

‡ Fossilium Catalogus, I., pt. 29 Ammon., Neocretac., 1925, p. 104.

§ Loc. cit. p. 177, also "Sur L'Ammonites peramplus et quelques autres fossiles Turoniens." Bul. Soc. Geol. France (3), vol. XXVII., 1899, p. 328.

¶ Spath: "Senonian Ammonoidea from Jamaica." Geol. Mag., Jan., 1925, pp. 29-30; also Geol. Mag., Feb., 1926.